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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,953	06/22/2001	Varouj Amirkhanian	1031/205	7677

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EXAMINER	
COUNTS, GARY W	

ART UNIT	PAPER NUMBER
1641	

DATE MAILED: 11/28/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/887,953	AMIRKHANIAN, VAROUJ	
	Examiner	Art Unit	
	Gary W. Counts	1641	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *19 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *10* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Status of the claims

The Request for Continued Examination (RCE) and amendment filed September 15, 2003 is acknowledged and has been entered.

Information Disclosure Statement

The Sepaniak et al., reference entitled "Demonstration of an Integrated Capillary Electrophoresis-laser induced fluorescence fiber-optic sensor" has not been considered because the copy received by the USPTO contains the pages of every other sheet (i.e. 1889, 1891, 1893, 1895, 18971899 and 1891), the even numbered pages are missing. Therefore, the complete relevance of the reference cannot be determined. It is recommended by Examiner to resubmit the Sepaniak et al reference for reconsideration.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The applicant discloses that the zone for optical detection of sample components is located at a widened zone along the separation

channel. And that the widened detection zone is a micro-bore collar having a micro-channel that coaxially surrounds the exit of a capillary column that defines a capillary channel. On pages 16, line 18 – page 17, line 5 in the specification. The applicant discloses that as the analytes flow from the separation channel 504 of capillary column 22 into the collar 10, the analytes remain subject to the applied potential. As a result, the analytes continue to maintain separation state as they migrate/flow past the detection zone 20. Some mixing or diffusion of the analytes may occur in the collar near the exit of the separation channel 504, but analytes "regroup" into separated state as they continue down along the collar 10 towards the detection zone 20. The detection zone 20 is preferably located at 100 x 500 ID of the collar, more like 225 times ID, to provide sufficient distance for the analytes to regroup before detection at the detection channel 504, the analyte bands are narrower in the axial direction. Thus the detection resolution may be improved as a result. The only specific disclosure of a transition occurs on page 1, lines 20-21 in the specification which discloses that bioanalysis, such as DNA analysis, is rapidly making the transition from a purely scientific quest for accuracy to a routine procedure with increased, proven dependability. The applicant does not disclose a transition from the first width to the second width. There is no description in the specification disclosing a transition from the first width to the second width.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-18 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 4 "a transition" is vague and indefinite. It is unclear what applicant is referring to. There is no definition provided for the term in the specification. See also deficiencies found in claim 16, part (a).

Claim 21, lines 4 & 5 "having a second width larger than the first width" is vague and indefinite. It is unclear if "the first width" is referring to the first width of the separation channel or if it is referring to a first width of the detection section. It is unclear if the detection section has a second width larger than a first width of the detection section or if the width of the detection section is larger than the width of the separation channel

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 2, 10 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu et al (US 5,763,277).

Zhu et al disclose a detection system which comprises a capillary tube (col 6, line 46) used for electrophoresis (separation channel) (col 2, lines 49-51). Zhu et al disclose that sample analyte fluorescence is caused to occur by the application of energy (excitation radiation) to sample analytes caused to be present within the system (col 2, lines 62-65, see also figure 1). Zhu et al disclose the use of an axially oriented fiber optic which is directed into an end of the detection section in proximity to the detection zone. Zhu et al disclose that this fiber optic transmits the produced fluorescence (radiation emission) to a detector system (col 3 lines 1-6, see also figure 1). Zhu et al also disclose that the inner diameter of the axially oriented system component is increased at the location of contained axially oriented fiber optic means (col 5, lines 1-3).

With respect to a transition as recited in the instant claims Zhu et al disclose an exit from a small diameter (first width) to a larger diameter (second width) (see figure 3). Therefore, Zhu et al disclose a transition from a first width to the second width.

With respect to the detection section defining a detection zone at a distance of 100 to 500 times the second width from the transition as recited in the instant claims, the optimum distance of the second width from the transition can be determined by routine experimentation and thus would have been obvious to one of ordinary skill in the art. Further, it has long been settled to be no more than routine experimentation for one of ordinary skill in the art to discover

an optimum value of a result effective variable. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum of workable ranges by routine experimentation." Application of Aller, 220 F.2d 454,456, 105 USPQ 233, 235-236 (C.C.P.A. 1955). "No invention is involved in discovering optimum ranges of a process by routine experimentation ." Id. At 458,105 USPQ at 236-237. The "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." Application of Boesch, 617 F.2d 272,276, 205 USPQ 215, 218-219 (C.C.P.A. 1980).

7. Claims 1, 2, 10 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yin et al (US 5,650,846).

Yin et al disclose a microcolumnar separation device (col 4, lines 20-67). Yin et al disclose that this microcolumn separation device can be a capillary electrophoresis channel (separation channel) (col 4). Yin et al disclose a means for introducing excitation radiation to the sample. Yin et al disclose a fiber optic for axially detection radiation emission (col 2, lines 38-40). Yin et al disclose that the separation channel has a first width and a transition from a first width to a second width (see Fig. 8).

With respect to the detection section defining a detection zone at a distance of 100 to 500 times the second width from the transition as recited in the instant claims, Yin et al is silent with respect to the distance. However the optimum distance of the second width from the transition can be determined by routine experimentation and thus would have been obvious to one of ordinary skill in the art. Further, it has long been settled to be no more than routine experimentation for one of ordinary skill in the art to discover an optimum value of a result effective variable. "[W]here the general conditions of a claim are disclosed in the prior art, it is

not inventive to discover the optimum of workable ranges by routine experimentation." Application of Aller, 220 F.2d 454,456, 105 USPQ 233, 235-236 (C.C.P.A. 1955). "No invention is involved in discovering optimum ranges of a process by routine experimentation ." Id. At 458,105 USPQ at 236-237. The "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." Application of Boesch, 617 F.2d 272,276, 205 USPQ 215, 218-219 (C.C.P.A. 1980).

8. Claims 3, 4 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yin et al in view of Taylor et al (Axial-beam Laser-Excited Fluorescence Detection in Capillary Electrophoresis, Anal. Chem. 1992, vol. 64, 1741-1744).

See above for teachings of Yin et al.

Yin et al differ from the instant invention in failing to teach a means for introducing excitation radiation axially at the detection zone. Zhu et al also fails to teach a boundary material that surrounds the light emitting material for guiding the excitation radiation from the excitation source to the detection zone.

Taylor et al disclose the use of an optical fiber, which focuses the excitation laser beam, which directs the light along the capillary rather than across it. Taylor et al also disclose that this fiber is inserted into the separation capillary (col 1, page 1742, lines 6-10). The use of this optical fiber allows for axial-beam fluorescence excitation which provides the added advantage of very little scattered light originating from the capillary walls which allows the use of capillaries with intact polyamide coatings without problems of interference due to absorption or greatly increased fluorescence

background. It also provides for a longer absorption path length compared to irradiation across the capillary (col 1, page 1741, lines 35-47). Taylor et al also disclose the use cladding material and a jacket, which surround the fiber for guiding the excitation radiation from the excitation source to the detection zone.

It would have been obvious to one of ordinary skill in the art to incorporate the use of a fiber and a surrounding material as taught by Taylor et al into the detection system of Yin et al because Taylor et al shows that the use of this fiber and surrounding material allows for axial-beam fluorescence excitation which provides the added advantage of very little scattered light originating from the capillary walls which allows for the use of capillaries with intact polyamide coatings without problems of interference due to absorption or greatly increased fluorescence background. It also provides for a longer absorption path length compared to irradiation across the capillary.

With respect to the light transmitting material having a refractive index greater than the refractive index of the boundary material as recited in the instant claims. It would have been obvious to one or ordinary skill in the art to incorporate a light transmitting material which has a refractive index greater than the refractive index of the boundary material because this would allow one to maintain the light with the fiber optic so that lose of the intensity of the light would not occur.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yin et al in view of Taylor et al as applied to claims 1, 2, 10 and 15-18 above, and further in view of Letcher et al (US 6,326,213) or Liu et al (US 5,444,807).

See above for teachings of Yin et al and Taylor et al.

Yin et al and Taylor et al differ from the instant invention in failing to teach the means for axially detecting radiation emission shares the same single fiber as the means for introducing excitation radiation axially to transmit excitation radiation and radiation emission.

Letcher et al disclose a single step-tapered fiber used for excitation and detection (col 3, lines 1 and 2, see also abstract). The use of this fiber allows for enhancement of the sensitivity of a fiber-optic biosensor using fluorescent immunoassay techniques for the rapid detection of an analyte.

Liu et al (US 5,444,807) disclose a single fiber optic for both axial light input to and output from flow through detectors (abstract and col 6, lines 44-60). Liu et al disclose that this provides for a novel technique by which light absorption and fluorescence may be used as measures of properties of small amounts of a flowing fluid analyte, particularly in conjunction with liquid chromatography and capillary electrophoresis (col 4, lines 36-50).

It would have been obvious to one of ordinary skill in the art to incorporate the fiber of Letcher et al into the modified system of Yin et al because Letcher et al shows that the use of this fiber allows for enhancement of the sensitivity of a fiber-optic biosensor using fluorescent immunoassay techniques for the rapid detection of an analyte.

It also would have been obvious to one of ordinary skill in the art to incorporate the fiber optic of Liu et al into the modified system of Yin et al because Liu et al shows that this provides for a novel technique by which light absorption and fluorescence may

be used as measures of properties of small amounts of a flowing fluid analyte, particularly in conjunction with liquid chromatography and capillary electrophoresis.

10. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yin et al in view of Taylor et al and Letcher et al or Liu et al as applied to claims 1, 2, 5, 10 and 15-18 above, and further in view of Hazman et al (US 5,625,403).

See above for teachings of Yin et al, Taylor et al, Letcher et al and Liu et al.

Yin et al, Taylor et al, Letcher et al and Liu et al differ from the instant invention in failing to disclose a confocal optical element that transmits excitation radiation and radiation emission.

Hazman et al disclose the use of a dichroic beam combiner along with a set of lens. This dichroic beam combiner is used to selectively reflect and transmit light according to its wavelength (col 4, lines 30-33). The use of the beam combiner and set of lens allows for the combination of laser beams and enabling the realization of a practical high power optical head.

It would have been obvious to one or ordinary skill in the art to incorporate the beam combiner and set of lens as taught by Hazman et al into the system of Yin et al because Hazman et al shows that the use of the beam combiner allows for selectivity of light reflection and transmission according to its wavelength and the beam combiner and set of lens also allows for the combination of laser beams and enabling the realization of a practical high power optical head.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al (Axial-Beam Laser-Excited Fluorescence Detection in Capillary electrophoresis, Anal.

Chen. 1992, Vol. 64, 1741-1744) in view of Yin et al (US 5,650,846) or Zhu et al (us 5,763,277).

Taylor et al disclose a detection system for axial-beam laser excited fluorescence detection in capillary electrophoresis. Taylor et al disclose the use of a fiber optic which focuses the excitation laser beam which directs the light along the capillary rather than across it (col 1, page 1741, lines 1-27). Taylor et al also disclose that this fiber is directed into an end of the detection section in proximity to the detection zone (col 1, page 1742, lines 8-10). Taylor et al also disclose the use of cladding material and a jacket which surround the fiber for guiding the excitation radiation from the excitation source to the detection zone (col 2, page 1741, lines 12-18). Taylor et al also disclose a means for detecting radiation emission from the detection zone (col 1, page 1742, lines 22-39).

Taylor et al differs from the instant invention in failing to teach the separation channel having a first width, and the detection zone having a second width larger than the first width.

Yin et al disclose a microcolumnar separation device (col 4, lines 20-67). Yin et al disclose that this microcolumn separation device can be a capillary electrophoresis channel (separation channel) (col 4). Yin et al disclose that the separation channel comprises a detection section (Fig. 8, items 18, 124 139, 130 and 128, the detection region extends from item 18 to item 130). Yin et al disclose that the separation channel comprises a flare located at the end of the separation channel (col 7, line 48 – column 8, line 9). Yin et al disclose that detection section has an enlarged opening to the lumen

of the separation channel for receiving the optical fiber and for a zone of detection. Yin et al disclose that detection zone provides the alignment and nonfixed confinement of optical fiber to the separation channel.

Zhu et al disclose a detection system which comprises a capillary tube (col 6, line 46) used for electrophoresis (separation channel) (col 2, lines 49-51) which defines a detection zone. Zhu et al also disclose that the inner diameter of the axially oriented system component is increased at the location of contained axially oriented fiber optic means (col 5, lines 1-3). Zhu et al disclose that the increased diameter provides a non-constricted annular space in which sample analyte containing sample solution can flow, in the presence of the fiber optic (col 6, lines 15-21).

It would have been obvious to one of ordinary skill in the art to incorporate a detection zone as taught by Yin et al into the device of Taylor et al because Yin et al shows that this detection zone provides the alignment and nonfixed confinement of optical fiber to the microcolumn.

It also would have been obvious to one of ordinary skill in the art to incorporate a separation channel and detection zone has taught by Zhu et al into the device of Taylor et al because Zhu et al shows that this separation channel and detection zone provides a non-constricted annular space in which sample analyte containing sample solution can flow, in the presence of the fiber optic.

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11

F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 1-18 are rejected under the judicially created doctrine of double patenting over claims 1-19 of U. S. Patent No. 6,529,275 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: Both the instant application and US Patent 6,529,275 claim a detection system for a bio-separation device a detection section along the separation channel having a second width larger than a first width and a transition from the first width to the second width, the detection section defining a detection zone at a distance of 100 to 500 times the second width from the transition; means for introducing excitation and means for axially detecting radiation emission.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

14. Claim 21 is provisionally rejected under the judicially created doctrine of double patenting over claims 1-31 of copending Application No. 09/887,871. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: a detection system comprising a detection section along the separation channel defining a detection zone, the separation channel having a first width, and the detection zone having a second width larger than the first width; means for introducing excitation radiation axially and means for detecting radiation emission from the detection zone.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Response to Arguments

15. Applicant's arguments filed September 15, 2003 have been fully considered but they are not persuasive.

112 Rejection Arguments

Applicant argues that the term "transition" is not vague. Applicant directs Examiner's attention to Figures 2B, 9B, 10B and 13. Applicant states that anywhere a

flow path goes from a first width to a second width, inherently there must be a transition from the first width to the second width and that claims 1 and 16 are definite, given the disclosure of the specification as a whole. This is not found persuasive because it is unclear where the transition zone starts or where the transition zone ends. Referring to Figure 2B, does the transition zone begin at numeric representative 21 and end somewhere along separation channel 22 or is the transition from 504 to detection zone 20 or is the transition zone the opening of the separation channel into the collar. Further, the disclosure has not defined or disclosed the transition.

Applicant further argues that the related patent applicant serial no. 09/887,872 had issued as U.S. Patent No. 6,529,275, which claims also employ the "transition" recitation based on essentially a similar disclosure. This is not found persuasive because each individual application is reviewed and examined on its own merits.

103 Rejection Arguments

Applicant argues that Zhu does not teach or suggest that the detection zone could or should be located at a distance 100 to 500 times of the diameter of the widened section from the transition to the widened section. Applicant argues that Zhu is silent to the location of the detection zone and to defining the detection zone to be 100 to 500 times the diameter of the widened section from the transition to the widened section. Examiner agrees that Zhu does not specifically define the detection zone and that the detection zone be located at a distance 100-500 times the diameter of the widened section from the transition to the widened section. However, Zhu et al does teach the concept that the fiber optic is positioned in a widened section of the

separation channel and that the fiber optic is placed at a distance from the transition point and as stated in the previous office action and above, the optimum distance can be determined by routine experimentation and thus would have been obvious to one of ordinary skill in the art. Applicant further argues that Zhu did not address the concern with mixing and diffusion and regrouping of analyte back into separated state and that the present invention enables improved detection of the separated analytes, by taking into consideration of effects of mixing, diffusion and regrouping. Such consideration and benefits need not be recited in the claims, since the limitation of the specific location of the detection zone would allow such benefits to be accomplished. This is not found persuasive because since one of ordinary skill in the art would vary the distance of the detection zone for optimization purposes, the varied distance would provide the benefits of mixing, diffusion and regrouping of the analyte.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary W. Counts whose telephone number is (703) 305-1444. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (703) 305-3399. The fax phone number for the organization where this application or proceeding is assigned is (703)308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Gary W. Counts
Examiner
Art Unit 1641
November 19, 2003

LONG V. LE
SUPERVISORY PATENT EXAMINER
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11/26/03